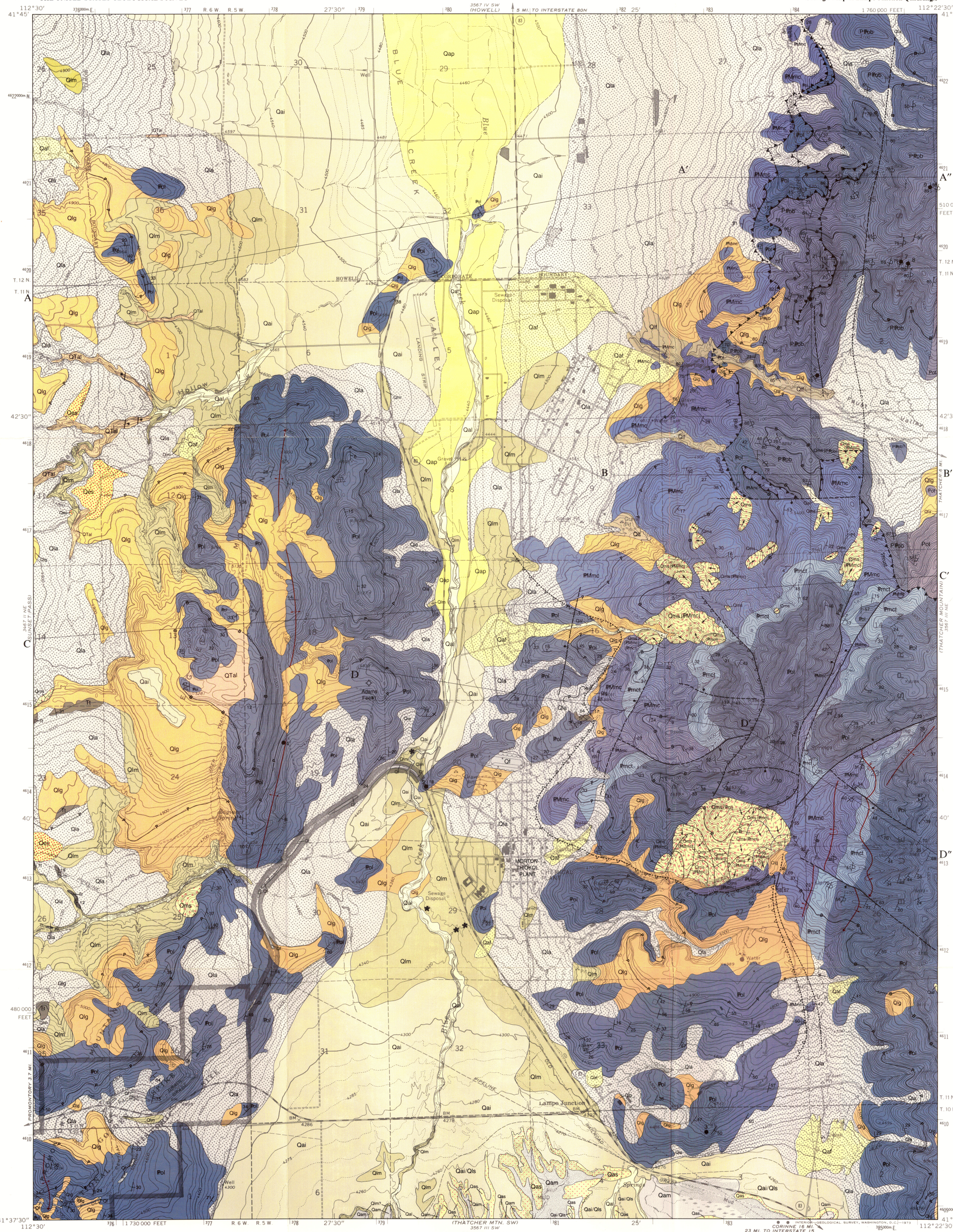
UTAH GEOLOGICAL SURVEY
UTAH DEPARTMENT OF NATURAL RESOURCES
in cooperation with
THE UNITED STATES GEOLOGICAL SURVEY

Plate 1
Utah Geological Survey Map 136
Geologic Map of Lampo Junction Quadrangle

3467 I SE (BULLS PASS)
3567 IV SE (BLIND SPRINGS)
3467 II NE (SUNSET PASS)
3567 III NE (THATCHER MOUNTAIN)
3467 II SE (GOLDEN SPIKE MONUMENT)
3567 III SE (PUBLIC SHOOTING GROUNDS)
3567 IV SW (HOWELL)
(THATCHER MTN. SW) 3567 III SW

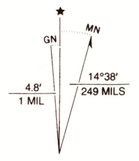


Base from U.S. Geological Survey,
Lampo Junction Quadrangle, 1972.

SCALE 1:24 000

1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL



UTM GRID AND 1991 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

GEOLOGIC MAP OF THE LAMPO JUNCTION QUADRANGLE BOX ELDER COUNTY, UTAH

by

David M. Miller[1], Max D. Crittenden, Jr.[2], and Teresa E. Jordan[1]
[1]U.S. Geological Survey, [2]Deceased

1991

QUADRANGLE LOCATION

Field mapping by D.M. Miller, 1982, 1984-1987, M.D. Crittenden, Jr., 1981-1982, T.E. Jordan, 1982, 1984.
Assisted by J.D. Schneyer, 1981-1982, and by R.W. Allmendinger and M.L. Johnson, 1982.
Patricia H. Speranza, Cartographer

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1973

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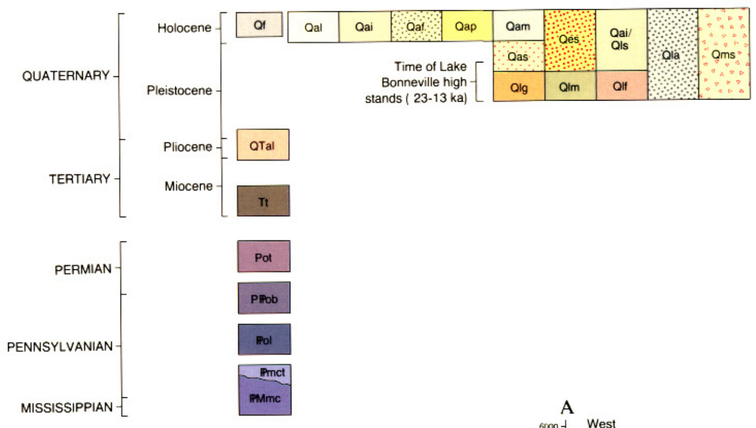
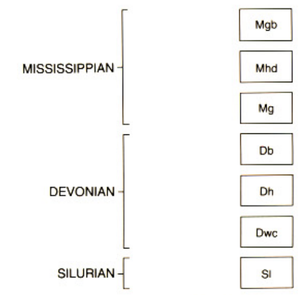
Plate 2
Utah Geological Survey Map 136
Geologic Map of Lampo Junction Quadrangle

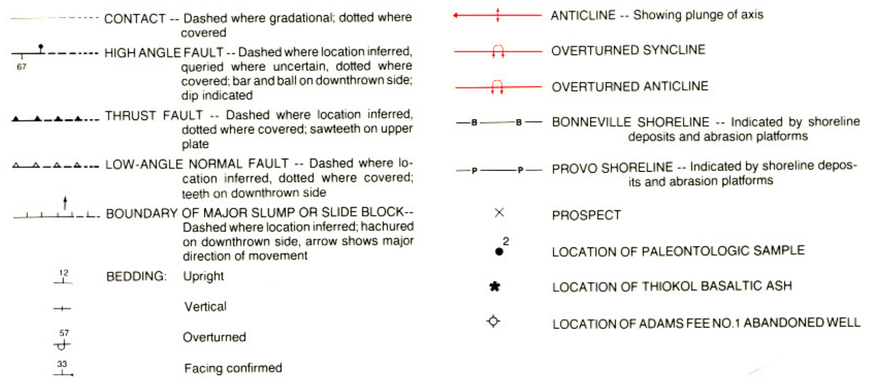
CORRELATION OF MAP UNITS

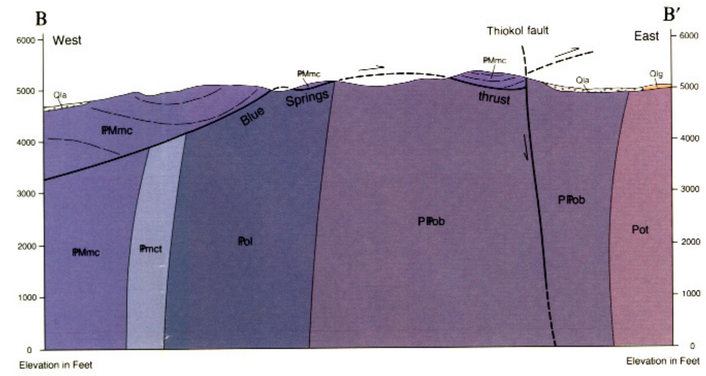


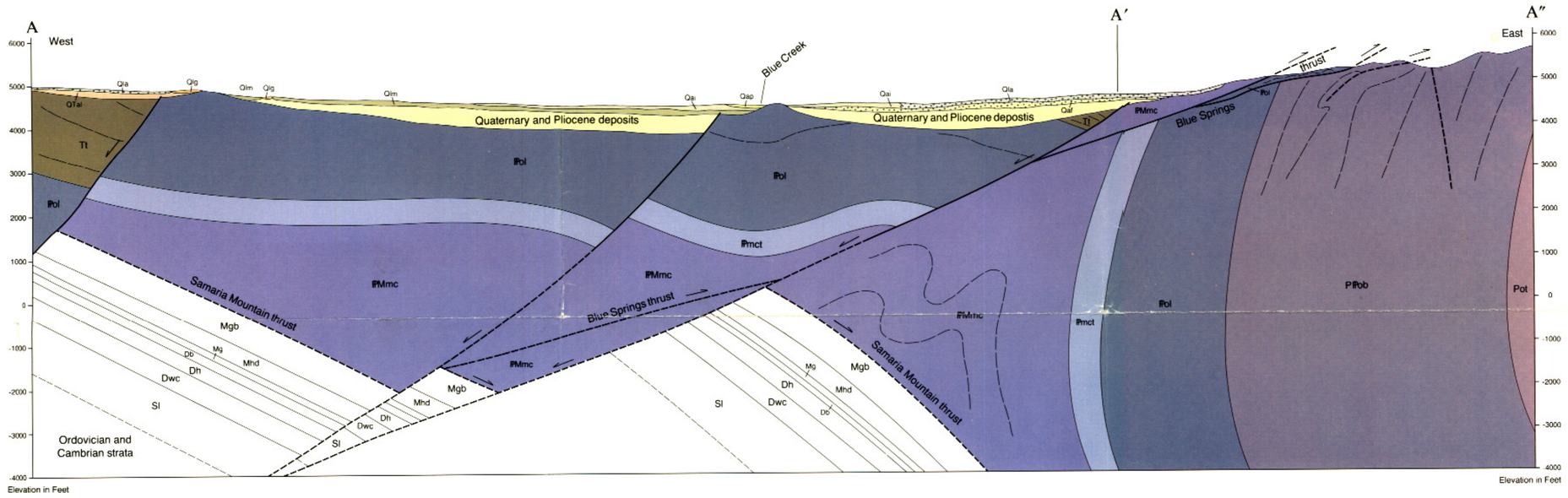
UNITS SHOWN ONLY IN CROSS SECTION

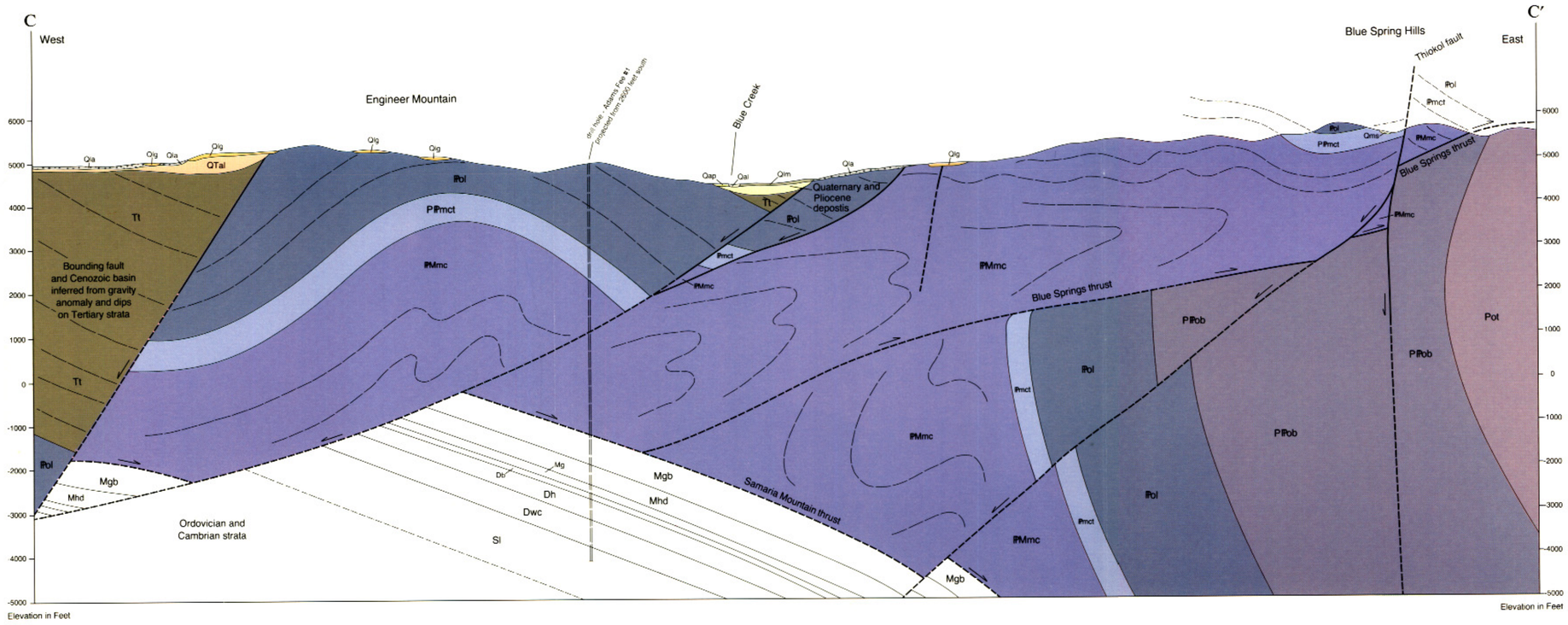


MAP SYMBOLS









DESCRIPTION OF MAP UNITS

Qf Fill (Holocene) — *Material used to construct building pads and railroad grades.*

Qal Alluvium (Holocene) — *Poorly sorted gravel, sand, silt, and clay in and near ephemeral and perennial stream channels.*

Qai Alluvial silt (Holocene) — *Dark-brown silt, sand, and clay occupying flood plains, distal alluvial fans, and low-gradient stream channels. Includes ponded deposits behind lacustrine bars of Lake Bonneville about 5140 feet (1567 m) elevation, west of Engineer Mountain.*

Qaf Alluvial-fan deposits (Holocene) — *Poorly sorted gravel, sand, silt, and clay forming fans and terraces.*

Qap Alluvial-plain deposits (Holocene) — *Brown, thin-bedded sand, silt, and clay deposits chiefly located along the Blue Creek flood plain.*

Qam Alluvial mud (Holocene) — *Dark-brown organic-rich clay and silt deposits forming mud flats.*

Qes Eolian sand (Holocene and Pleistocene) — *Medium-brown sand in dunes and sheets. Commonly contains more than 75% volcanic glass shards.*

Qai/Qls Thin alluvial silt overlying lacustrine sand (Holocene and Pleistocene) — *Brown, well-sorted, unbedded sand deposited in the Gilbert shoreline overlain by thin deposits of alluvial silt and sand.*

Qls Lacustrine and alluvial deposits, undivided (Holocene and Pleistocene) — *Unsorted alluvial deposits partly reworked by shoreline processes, patches of lacustrine silt and marl, local alluvium covering lacustrine deposits, and marly sand of mixed alluvial and lacustrine origin.*

Qms Mass-movement slides (Holocene and Pleistocene) — *Slumped material and slide blocks. Rock units in slide indicated in parentheses where other than colluvium. Hachures indicate headwall scarp.*

Qas Alluvial sand and silt (Pleistocene) — *Red sand and silt beds deposited on lacustrine (white) marl and overlain by shoreline sand deposited by the Gilbert stage of Lake Bonneville.*

Qlg Lacustrine gravel (Pleistocene) — *Unconsolidated and tufa-cemented gravel as large as cobbles, with silt matrix. Forms bars and tombolos.*

Qlm Lacustrine marl (Pleistocene) — *White to pale-brown, laminated marl with dropstones. Locally includes sand beds, gravel lenses, and a basalt tuff bed. Deposited in Lake Bonneville. Lower parts of unit show convolute lamination and roll structures in valleys west of Blue Creek Valley.*

Qlf Lacustrine fine-grained sediment (Pleistocene) — *Light-colored clay, silt, and sand, in places with interbeds of sand and gravel.*

QTal Alluvium and loess, undivided (Pleistocene to Miocene) — *Unconsolidated to cemented, white caliche-coated boulders, cobbles, and pebbles near terrace crests. Underlain by red, moderately consolidated, well-bedded alluvium and locally thick accumulations of fine sand and silt-sized loess. Thin to thick bedded. Clasts mostly rounded quartzite and subangular shale and siltstone.*

Tt Tuff (Miocene) — *Moderately consolidated, gray to brown tuff and tuff redeposited in streams and lakes. Air-fall tuff is 100% glass shards; redeposited tuff contains varying amounts of sand grains and lithic fragments, and is size-sorted and bedded. Interbedded with sand, silt, and marl. Generally dips 10 to 30 degrees eastward.*

Oquirrh Formation-divided into:

Pot Thinly bedded member (Lower Permian) — *Thin-bedded siltstone and calcisiltite with common lenses of dark-brown chert.*

PPob Bioturbated limestone member (Lower Permian and Upper and Middle? Pennsylvanian) — *Light-medium-gray, silty and sandy limestone and brown, calcareous, very-fine-grained sandstone. Bioturbated beds and laminated beds are interbedded on medium to thick scale.*

PPol Limestone member (Middle? and Lower Pennsylvanian)-Lightto mediumgray limestone and minor brown sandstone. Thickly to medium bedded, fossiliferous, and locally cherty.

Manning Canyon Shale-divided into:

PPmct Transitional member (Lower Pennsylvanian) — *Interbedded quartzite, siltstone, and medium-bedded fossiliferous limestone; transitional into the limestone member of the Oquirrh Formation.*

PMmc Lower member (Pennsylvanian and Upper Mississippian) — *Medium- to coarse-grained sandstone, boldly exposed dark-brown quartzite, and poorly exposed interbedded gray and black shale and siltstone. Rare fossiliferous limestone.*

SHOWN ONLY IN CROSS SECTIONS

Mgb Great Blue Limestone (Mississippian) — *Locally cherty, thick-bedded limestone containing corals.*

Mhd Humbug Formation and Deseret Limestone, undivided (Mississippian) — *Brown sandy and silty limestone and calcareous siltstone.*

Mg Gardison Limestone (Mississippian) — *Dark-gray, thin-bedded fossiliferous limestone.*

Db Beirdneau Formation (Devonian) — *Calcareous sandstone, dark dolomite, and limestone.*

Dh Hyrum Dolomite (Devonian) — *Dolomite and limestone.*

Dwc Water Canyon Formation (Devonian) — *Conspicuously laminated light- and dark-gray dolomite.*

Sl Laketown Dolomite (Silurian) — *Pale-gray to white dolomite.*

FORMATION	MEMBER	SYMBOL	THICKNESS feet (meters)	LITHOLOGY
Oquirrh Formation	Thinly bedded member	Pot	> 2000 (> 610)	
	Bioturbated limestone member	PPob	5500 (1675)	
	Limestone member	PPol	3000 (915)	
Manning Canyon Shale	Transitional member	PPmct	600 (183)	
	Lower member	PMmc	> 3000 (> 915)	

Sections C and D are approximately continuous with Sections A and B, respectively, of the adjacent Thatcher Mountain quadrangle (Jordan and others, 1988b)